Online Teaching:Problems and Solutions

September 01, 2001

Whether you are a web master or a neophyte, you have heard the buzzwords: distance education, internet delivery, online teaching, web based courses, cybereducation. There is no one formula for what such a course includes, but it usually involves some combination of email, message boards, multi-media, learning drills, virtual simulations, and online testing.

If you have been waiting for all this to just go away or get really easy, the time has come to stop waiting and get on board. I have heard or experienced most problems with, objections to, and hurdles of distance education, and this article reviews them and suggests solutions. Some of these problems are technical, and involve limitations of hardware or software, while others tend to be rooted in human nature or organizations. My experience is that there is a way around every glitch, hurdle, and objection, and the fruits of distance learning make the effort worthwhile.

PHILOSOPHICAL/ADMINISTRATIVE OBJECTIONS

There are many segments of the college community who look upon online education with genuine fear, but the fears are based upon misunderstanding.

OBJECTION: Concern about instructional quality.

ANSWER: The hallmark of a good learning experience is interaction between instructor and professor. Whether or not this is accomplished will be determined primarily by variables such as instructor skills and class size, not whether interaction is mediated via computer. One-way communication is poor quality education, whether it be a in the form of a boring lecture, talking head video, or "lecture" notes published on the web. My experience is that computer facilitated distance education permits ongoing inter-action not limited by space or time, and is therefore potentially superior to classroom seat time (although maybe not in every discipline, with every student, or with every instructor).

OBJECTION: Professors are worried about loss of jobs.

ANSWER: Their fear is that at some point in the future, one big computer will "teach" all the world's students, and professors will be automated out of their jobs. This was a real concern in the 1950s with telecourses (which failed pedagogically because of the lack of interactivity). Computer facilitated distance education is labor intensive: instructors must build and maintain web sites, respond to email, monitor message boards, and stay abreast of ever-changing technology. Class sizes must be smaller, not larger.

OBJECTION: Economically disadvantaged students cannot afford a computer or internet service.

ANSWER: Computers are a great equalizer. Poor students are less able to go away to college and live in

a dorm, but now the great universities can come to any inner city housing project or out of the way rural area forgotten by economic progress. Institutions such as libraries can provide public access to terminals. Free email providers now abound. The price of used computers powerful enough to surf the web gets cheaper every year. One of the challenges is to make sure that the instructor's latest materials are retrocompatible with the older machines. (At home I have maintained an older machines and versions of Windows just to make sure that my drills and simulations will run on them.)

OBJECTION: Disabled students cannot access some computer features.

ANSWER: On campus lecture based classes provide more barriers for students with limitations of mobility, sight or hearing. Think of computers as motor and sensory prostheses. The trick is to design materials so that they will meet the needs of these students. In general, stick with pure ASCII text as the best way to assure that something can be translated into another sensory modality.

TECHNOLOGICAL HURDLES

HURDLE: The administration says we must build the wiring backbone before we can do online courses.

ANSWER: Some administrators are still in this "railroad model": we have to lay track before we can run the trains. Online courses use a trucking model: the trucking company does not have to build the highway, it uses what is already there. Universities do not have to build web sites or email systems. The internet already exists, and as long as instructors and students have a computer and internet connection at home, that is all that is needed. Providing students and professors web access from many points on campus is helpful, but not essential.

HURDLE: It takes too long to build great web sites.

SOLUTION: Too many web masters use the medieval cathedral model: each city had to spend a hundred years building its own, and tried to make it better than the other cities' cathedrals. But clicks are quicker than bricks: just link to another web site. Perhaps post-Gutenberg professors heard a similar objection: how will you have time to write all the books we need for a library? After the printing press, you did not have to write all the books, you just had to get a cheap copy. In the web age, you don't have to skirt copyright laws by copying things onto your website, just link to somebody else's.

HURDLE: Download times are too long.

SOLUTION: This is a genuine concern. Prepare files in such a way as to reduce download time. One backup solution is to offer the students some of the materials on disks or CD-ROMS.

PROBLEM: Attached files get corrupted or carry viruses.

SOLUTION: Forbid students to send attached files. Require all email from students to be in the form of pure text in the body of the letter. This can be as simple as writing something in a generic word processing program (such as Notepad), putting it on the clipboard, and then pasting it into the body of the email message.

PROBLEM: Our institution's server is unreliable.

SOLUTION: Right, and that is why Delphi, and Juno, and Yahoo do not use your college's server, but you do not have to either. In general, have at least two ways to do everything, and then any one server's failure is no great obstacle. If you just need a site where students can download files or programs, consider ecircles, egroups, idrive, xdrive, driveway or ureach (my favorite). Go to www.ureach.com/tlbrink and click on my public files to download some of the drills or simulations I use. For example, try the psyc folders and download the self-administering personality test, PERSONAL.EXE; remember that it is a program to be run and not a file to be opened, so just click on it. If you like anything else you see, go ahead and store it on your server for your students. Just tell me about it, so that my students can also get these programs off of your server. That's how you back things up on several servers!

PRACTICAL PROBLEMS

The biggest problem with online teaching is forgetting that the goal is to create materials to facilitate student learning (simple and easy to use), instead of showing off one's technological prowess.

OBJECTION: Some web sites look like mini textbooks.

ANSWER: Correct, and there is no need to make such web sites, since students can and should still have textbooks. Online material should be more interactive than that typically found in a printed textbook.

PROBLEM: Students report problems with plug ins and sound cards necessary for audio visual.

SOLUTION: Forget the streaming AV, especially talking head videos. This problem will resolve itself in about 24 months as soon as some new standard forges a stronger link between the internet and portable players. One alternative would be to distribute video or audio cassettes. I especially recommend the latter for students to use while driving or cleaning the house. My audio cassettes have a one hour, all semester review of the most important part of my lectures. My video cassette has no talking heads, just moving diagrams. The pace would be too intense for the classroom or broadcast TV, but the student has the pause and rewind buttons to control the pace.

PROBLEM: Chat rooms are real wastes of time.

SOLUTION: True, but they can be replaced. A useful tool which would answer 90% of chat room questions would be a terms list keyed to the textbook. See my terms file geared to Coon's Essentials of Psychology, 8th edition. Check out www.ureach.com/tlbrink public file cabinet. Go ahead: copy and edit it to your course and textbook. What is the advantage over the glossary in the back of the book? You can customize it to the way you teach the course and the student can search a term electronically with a CONTROL-F command in Word.

PROBLEM: Instructors are barraged by too many emails.

SOLUTION: *Pre-empt most of the emails by giving students an electronically searchable FAQ (frequently asked questions) file.* See my FAQ file at ureach for the answers students seek in most of

their emailed questions: When is the final? Where is the final? What is on the final? Is it essay? Is it open book? Check out www.ureach.com/tlbrink public file cabinet for my FAQ course file. You can copy it and edit it to suit your course.

HUMAN FRAILTY

Most everyday frustrations with online teaching do not occur because of the inherent limitations of technology, but due to the degree of variability in the human capacity to interact with technology. These can be limited by wise policies, but never eliminated.

PROBLEM: Students "accidentally" delete messages and want them resent.

SOLUTION: Require students to have at least two email addresses. If one server is down or the message is deleted, the other is a backup. This means that the instructor sends to both of the students' email addresses, but with an email list it makes no difference if there are 20 addresses on the list or 200. Also, all material sent out email can be backed up on a website.

PROBLEM: Professors "accidentally" delete student emails.

SOLUTION: Professors also need to have at least two email addresses.

PROBLEM: Students send unidentified emails.

SOLUTION: Right, and it is hard to remember that sexything666@aol.com is that not the punk rocker in row five but the retired army supply sergeant. One solution is to require all students to put their names (and section) at the top of each email, or else it will not be credited. Another solution is to assign each student an email address corresponding to the name.

PROBLEM: Students are cluttering the discussion with irrelevant points and flame wars.

SOLUTION: That happens on any unmoderated list or message board, even those of professionals and scholars. Think of these unwanted comments as weeds among the flowers. You are the gardener, and you cannot avoid the work of weeding out the bad. *Any email list must be monitored by you.* Any message board must be edited by you. How much extra work will this take? That depends upon how fussy you are about the appearance of your garden. To delete the few flames and badly written emails is easy. To go into each student email and correct the grammar and formatting takes hours.

PROBLEM: Students forget their passwords and cannot log on.

SOLUTION: The use of passwords reflects the classroom security model: lock the door so that someone does not get in and steal something. On your web site, what can be stolen? Your brilliant ideas that someone else may use? Where possible, get rid of the passwords. *We need to replace the culture of secrecy with a culture of sharing.*

PROBLEM: Students do not check their email.

SOLUTION: This is the equivalent to not showing up for class or not reading the book. Online courses are more convenient to attend, but nothing is a cure for laziness.

OBJECTION: Cheating will be easier.

ANSWER: The risk is that someone else other than the student registered in the class could be on the terminal doing the work, but unless you check picture ID's in your lecture classes, how do you know that John Doe is really not Don Cho? *Electronic submission of assignments actually makes it easier to catch cheating in the form of plagiarism.* Just look at the similar formatting and typos.

FEAR OF THE UNKNOWN

OBJECTION: If we do away with passwords, anyone can enter my virtual classroom.
ANSWER: Yes, and they do, and it is great! My students in abnormal psychology have interacted with dozens of psychologists, psychiatrists, and social workers around the country, even with a Venezuelan psychoanalyst. A Jungian analyst in private practice lurking on my list gently corrected my misunderstanding of a term. What are you afraid of? Unruly students? I maintain more control over a proctored email list or message board than I have over an unruly student in the physical classroom.

CONCLUSION

Technical, organizational and philosophical barriers can be overcome. Start with something small and simpler if this allows you to enter the online world of teaching. If some or much of what you have just read sounds too complicated, I urge you to sit down with colleagues on campus who use some of the teaching techniques and processes discussed above, and ask them what the most exciting thing is that they do that was not done five years ago. Be prepared for some hard work, a little frustration, and a great deal of satisfaction in becoming a more effective educator.

References & Recommended Readings

FREE EMAIL SERVICES

www.juno.com

www.yahoo.com

www.popmail.com

www.fepg.net

FREE INTERNET PROVIDERS

www.juno.com

www.netzero.net

FREE HOSTED FORUMS

www.delphi.com

FREE GAMES AND TESTING

www.quia.com

www.funbrain.com

(Of course, these resources might be dated by the time you read this article.)

Note: This article first appeared in the September 2001 (Vol. 14, No. 7) issue of the *APS Observer*.